Cider PRESS

San Francisco Apple Core

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GENERAL MEETINGS:

SWAP MEET! SEP 10
OCT 15
NOV 19

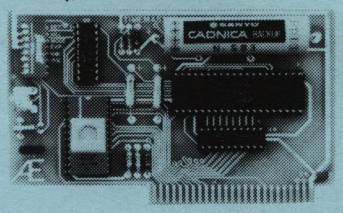
SEPTEMBER, 1983

Apple Peripherals Are All We Make

That's Why We're So Good At It!

The TIMEMASTER
Finally, a clock that does it ALL!

NEW



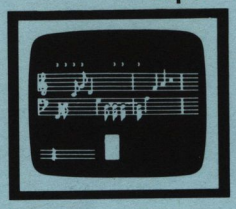
- Designed in 1983 using I.C. technologies that simply did not exist when most other Apple clocks were designed.
- Just plug it in and your programs can read the year, month, date, day, and time — down to 1 millisecond!
- Powerful 2K ROM driver — No clock could be easier to use.
- Full emulation of most other clocks, including Mountain Hardware's Appleclock (but you'll like the TIMEMASTER mode better).
- Compatible with all of Apple's languages, CP/M and PASCAL software on disk.
- Eight software controlled interrupts so you can execute two programs at the same time. (Many examples are included)
- On board timer lets you time any interval up to 48 days long down to the nearest millisecond.

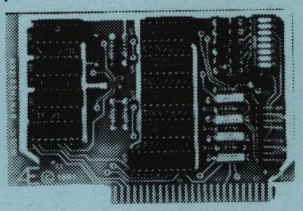
The TIMEMASTER includes a disk with some really fantastic time oriented programs (over 25) plus a DOS dater so it will automatically add the date when disk files are created or modified. This disk is over a $200.00 value alone — we give the software others sell. All software packages for business, data base management and communications are made to read the TIMEMASTER.

If you want the most powerful and the easiest to use clock for your Apple, you want a TIMEMASTER.

PRICE $129.00

Super Music Synthesizer



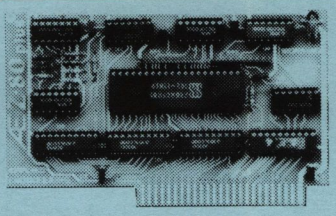


- Complete 16 voice music synthesizer on one card. Just plug it into your Apple, connect the audio cable (supplied) to your stereo, boot the disk supplied and you are ready to input and play songs.
- It's easy to program music with our compose software. You will start right away at inputting your favorite songs. The Hi-Res screen shows what you have entered in standard sheet music format.
- Now with new improved software for the easiest and fastest music input system available anywhere.
- We give you lots of software. In addition to Compose and Play programs, the disk is filled with over 30 songs ready to play.
- Easy to program in Basic to generate complex sound effects. Now your games can have explosions, phaser zaps, train whistles, death cries. You name it, this card can do it.
- Four white noise generators which are great for sound effects.
- Plays music in true stereo as well as true discrete quadraphonic.
- Full control of attack, volume, decay, sustain and release.
- Will play songs written for ALF synthesizer (ALF software will not take advantage of all the features of this board. Their software sounds the same in our synthesizer.)
- Automatic shutoff on power-up or if reset is pushed.
- Many many more features.

PRICE $159.00

Z-80 PLUS!

NEW



- An on-card PROM eliminates many I.C.'s for a cooler, less power consuming board. (We use the Z-80A at a fast 3.58 MHZ)
- Does EVERYTHING the other Z-80 boards do, plus Z-80 interrupts.
- All new 1983 design incorporates the latest in I.C. technologies.
- Complete documentation included. (User must furnish software)

The Z-80 PLUS turns your Apple into a CP/M based computer. This means you can access the largest body of software in existence. Two computers in one and the advantages of both, all at an unbelievably low price.

COMING SOON: The Z-80 Plus for the Apple III

- TOTALLY compatible with ALL CP/M software.
- Executes the full Z-80 and 8080 instruction set.
- Fully compatible with microsoft disks (no pre-boot required).

PRICE $139.00

Analog to Digital Converter

- 8 Channels
- 8 Bit Resolution
- On Board Memory
- Fast Conversion (.078 ms per channel)
- Eliminates the Need to Wait for A/D Conversion (just PEEK at data)
- A/D Process Totally Transparent to Apple (looks like memory)

The analog to digital conversion takes place on a continuous, channel sequencing basis. Data is automatically transferred to on board memory at the end of each conversion. No A/D converter could be easier to use.

Our A/D board comes standard with 0, 10V full scale inputs. These inputs can be changed by the user to 0, -10V, or -5V, +5V or other ranges as needed.

Information on temperature sensors is given in manual.

The user connector has +12 and -12 volts on it so you can power your sensors.

Accuracy 0.3% Input Resistance 20K Ohms Typ

A few applications may include monitoring and control of ● flow ● temperature ● humidity ● wind speed ● wind direction ● light intensity ● pressure ● RPM ● storage oscilloscope ● soil moisture and many more.

We also manufacture a 16 channel digital input/output board for control applications.

PRICE $129.00

IIe Only: 80 Column, 64K RAM Card

NEW

- Expand your Apple IIe to 128K memory.
- Provides an 80 column text display.
- TOTALLY compatible with ALL Apple software and languages, there are NO exceptions.
- Automatically expands VisiCalc to 95K storage. In 80 columns!
- COMPLETE documentation included. (We don't make you refer to the Apple manual as others do.)
- Uses the same commands as the Apple 80 column board.
- Incorporates the latest high speed, low power I.C. technologies.
- Plugs into the Apple IIe expansion slot.
- Simply the best expansion card for your Apple IIe at any price, offering you phenomenal performance at a very nominal price.

PRICE $149.00

Our boards are far superior to most of the consumer electronics made today. All I.C.'s are in high quality sockets with mil-spec. components used throughout. P.C. boards are glass-epoxy with gold contacts. Made in America to be the best in the world. All products work in APPLE IIe, II and II+. (Except 80 column card.)

Applied Engineering's products are fully tested with complete documentation and available for immediate delivery. All products are guaranteed with a no hassle two year warranty.

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REM These are the Dog Days - hot and sultry. Many of us are on vacation and wondering where the summer went. Soon we will have to give Sirius (hence the term "Dog Days") consideration to the projects we had hoped to finish before winter arrives.

I look forward to the coming of Robotics when I really will be able to paint the house and clean out the downspouts from the keyboard. There is one problem with all this and the actualization of my vision would only aggravate it.

This summer I have spent more time exercising at the keyboard than at the end of a lawn mower, baseball bat or paint brush. The growing problem is sitting on my lap - a developing computer belly.

Running around in circles with control codes, leaping over the hurdles of command sequences and doing "set-ups" of VisiCalc templates are exercises of the mind, not of the body. I don't like to think of an interest as an obsession, nor as something which affects my health.

I have decided to take Control W of my life, Shift my activities, Escape from my Routine and Return to a more active Program. Let's see now, how do I do that? ... control - shift - escape? ... or is it escape - control P - return?

-ed.

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Letters

Dear Cider Press,

Please re-route the credit of the sieve mentioned in the article on perfect numbers (Aug 83, p.4) to Eratosthenes, the Greek astronomer born in Cyrene in 276 B.C. In addition to the sieve he is renowned for measuring the size of the earth to a startling degree of accuracy - (within 8% error).

He and Euclid both were associated with the library at Alexandria at approximately this time. Aristophanes of Byzantium was a third Greek scholar of this era who wrote, in addition to other things, commentary on the works of Aristophanes of Athens, the well known Greek writer of old comedy.

Thank you,
Michael Ellis
Millbrae, CA

Printing Wanted

Writer/Apple user needs temporary access to a letter quality printer. I could send you my diskette(s) with files and necessary software. Will pay 10 cents per page plus postage. Please help; thanks.

Celeste Newbrough
(415) 653-8498

WANTED

I am looking for a large dark wood desk with a typing return on the left side. I have been hunting but haven't found such a beast. If anyone has one for sale at a reasonable price or knows someone who has one, please contact Sami Capron at 388-8631 (home) or 499-6669 (work).

For Sale

For Sale

Apple][+ w/64 K; 2 Apple disk drives; parallel card; serial card for Epson MX-100; Epson MX-100 printer; Apple graphics tablet; 80 column card; TG joystick; RF modulator and lots of software.

All for $3,000.00

Call David Kalman (415) 728-7737 (eve)

NewsNotes

Introducing and welcoming the new person in charge of office matters, Ms. Barbara Uzelac.

Barbara is a graduate student of Business Psychology at S.F. State University, having recently moved here from southern CA. She will be working in the clubhouse office Monday through Thursday from 10:00 to 1:00. If you call during those hours, you can have your message taken by a real human being. Welcome aboard!

▪ ▪ ▪ ▪ ▪

Steve Lloyd, longtime board member and recently Executive Secretary of the S.F.A.C. has left his position on the Board of Directors.

Steve was recently promoted and his new job brought with it more demands on his time and, we hope, a similar increase in satisfaction.

All of us on the Board of Directors want to thank Steve for his contributions and participation to date. We wish him success and happiness and still count him as an active club member and board alumnus.

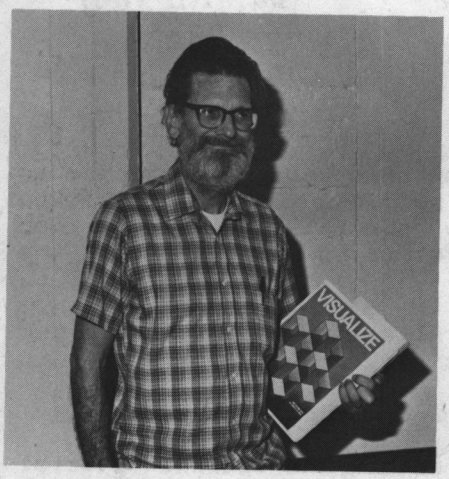
▪ ▪ ▪ ▪ ▪

Susan Nyman who, for what seems many years, ran the clubhouse office, has also moved on to new adventures and employment in the computer field. Gone but never forgotten, Susan. Thank you. We wish you well and hope to see you often.

Programming Contest Results

by

Don Scellato



Stan Dinsmore

Wm. Hong Stuart Bowen Don Scellato

The San Francisco Apple Core Programming Contest ended on July 31, 1983. We had many excellent entries. Seventeen programs or applications were entered by fourteen individuals.

Two entries were disqualified. One was disqualified because it was not presented on disk. The second was disqualified because the entrant was not a club member.

Both disqualified entrants will receive a one year subscription to the Apple Orchard magazine as will all other entrants. The non member entrant has been voted a free membership by the Board of Directors because of the excellent quality of his entry.

Enough of this BUSINESS !!! Now for the GOOD NEWS !!! The prizes were awarded in the following manner:

THE GRAND PRIZE - One Disk II Disk Drive with Controller donated by Apple Computer, Inc. -- Program: Isometric 3-D Plot - Author: Stuart W. Bowen.

PROGRAMMING UTILITIES - 128K Memory Expansion Card donated by Legend Industries - Program: Blossoming Forth - A Word Processor and Forth Tutorial - Authors: Dudley Ackerman and Edward Bronstein.

PROGRAMMING UTILITIES - Lexicom - A word processor conversion program donated by Microsparc, Inc. - Program: Hex/Dec Converter - Author: Stan Dinsmore.

MANAGEMENT - Dow Jones News and Quotes a stock market program donated by Apple Computer, Inc. - Program: Gas Buggy, an automobile expense tracking program - Author: Murray F. (Jack) Pennock.

MANAGEMENT - Pfs:GRAPH donated by The Software Publishing Company - Program: A Mailing List - Author: Kathy and Andy Rudovsky.

MANAGEMENT - Magic Window a word processor donated by Artsci, Inc. - Program: Make Labels - Author: Bob R. Warnock.

GAME AND ENTERTAINMENT - The Arcade Machine an arcade game writing program donated by Broderbund Software - Program: Hi-Res Movie/The Gorilla/Baseball Adventure - Author: John Chiang and Family.

SPREADSHEET APPLICATIONS - MagiCalc a spreadsheet program donated by Artsci, Inc. - Application: Performance Funding Spreadsheet - Author: William Hong.

SPREADSHEET APPLICATIONS - Visualize a Visicalc documenting aid contributed by Norell Data Systems - Application: Travel Expense Analysis - Author: Stan Dinsmore.

EDUCATION - Apple LOGO an educational authoring language donated by Apple Computer, Inc. - Program: Exploring the Human Body, an interactive game which teaches anatomy - Author: Jack Wilcox.

EDUCATION - Routine Machine, a collection of programming aids, donated by Southwestern Data Systems - Program: High Precision Multiplication a multiplication screen display and educational program - Author: Robert Karis.

EDUCATION - Bank Street Writer, a word processor, donated by Broderbund Software - Program: The Professor's Potions, a fraction teacher - Author: Jonathon Franklin.

HOME USE - Lode Runner, an arcade game donated by Broderbund Software - Program: Labelling Program, a versatile label maker - Author: John Ferneborg.

Those of us who organized the contest and arranged for the prizes wish to thank each entrant for the obvious time and hard work which went into each of the programs listed above.

We would like to thank the members of the Microcomputer Industry named above who thought our efforts were worthy of encouragement by donating the wonderful prizes listed above.

A special thanks goes to Jeff Bridges who developed an excellent Budget Program and submitted it although he was not a club member. His program will be released on disk along with all of the other programs listed above.

I'm sure you'll find that they are all useful or entertaining. Any of the readers who know any of the entrants should pass on their warmest congratulations and ours to them for the fine effort and accomplishment displayed.

Meeting Notes

The General Meeting on 20 Aug was an intimate group that was treated to a demonstration and presentation by Walt Broeder, formerly of Apple Computer.

Walt is the man who designed the //e and is now operating a company designing and manufacturing peripherals for the Apple. His company, Vision 7, is currently manufacturing an 80 column card with 64K RAM and RGB interface for the //e.

This board allows full utilization of the ultra-high resolution capabilities of the //e with an RGB colour monitor. Text and background colours can be independently controlled with 80 columns of text and pictures and graphs of startling clarity can be achieved.

The boards are sold with RGB monitors with which they must be matched for compatibility. Thanks to people like Walt Broeder, the quality and versatility of such products is increasing while the cost is coming down.

OctoberForce

(be with you)

-Michael Fischer

By the time you read this, the September swap meet will be over. Thanks to all who helped and a special thanks to Don Scellato for organizing and overseeing the event.

October's general meeting will feature two unusual and exciting presentations.

Movie Special Effects

Have you wondered how the optical special effects of movies such as *Star Wars, Star Trek* and *Battlestar Galactica* were done. It may surprise you to learn that they were created on an Apple. At the October meeting we will learn how.

Mat Beck, Paul Johnson and Ron Swallow, of Hollywood Hardware, will show how the effects are created. They will have a video tape presentation and show the peripheral hardware used on the Apple.

Hollywood Hardware markets the peripheral equipment originally designed and used in creating movie special effects. Hollywood's parent company, Apogee Inc., is responsbile for the Apple-created optical special effects in the movies mentioned above as well as *Caddyshack, Avalance Express, Firefox*, and the soon to be released James Bond movie *Never Say Never Again*.

Come see the presentation on Saturday, October 15 at 10 a.m. in Room 100, Building C, Fort Mason, Its cheaper and better than a trip to Universal Studios.

Turn Your Apple into a Lisa

Well not quite, but almost.

An add-on card which contains a Motorola 68000 microprocessor (the same one in Lisa) and 128-512 K of RAM will also be shown at October's meeting. The card, called *Saybrook*, will be demonstrated by Todd Miller, Vice President for Marketing of Analytical Engines.

The standard card, with an 8 MHz processor, runs at least 10 times faster than the Apple. A faster version runs at 12.5 MHz.

The card comes with the UCSD p-System version IV.1; Pascal, Fortran and BASIC compilers; an Applesoft compatible 68000 BASIC; and a 68000 assembler. It has a port for off-board RAM expansion up to 16 megabytes.

Member specials will be offered on *Saybrook* at the meeting. The standard card (8 MHz MC68000 processor and 128K RAM) will be sold for $1250 (normally $1550) and the 12.5 MHz card will be sold for $1650 (normally $1950).

REMEMBER . . .

The October meeting will start at 10 a.m. on Saturday, Octber 15, in Room 100, Building C, Fort Mason.

Hot Line(s)

We would like to establish a system of "HOT LINE" numbers. If you should have a burning question on some topic or need help & advice to complete some project or overcome some difficulty, you need only call the appropriate person to get closer to the answers you seek.

This "HOT LINE" network is of course, a list of volunteers who are willing to share some of their acquired computer knowledge with others.

Here is where there is room for you. Add your name to the list under your favourite computer topic (your choice).

If you call one of the people on the list, please be aware of certain things:

Don't expect or ask that you be called back if the call is "long distance."

Don't call at unreasonable hours.

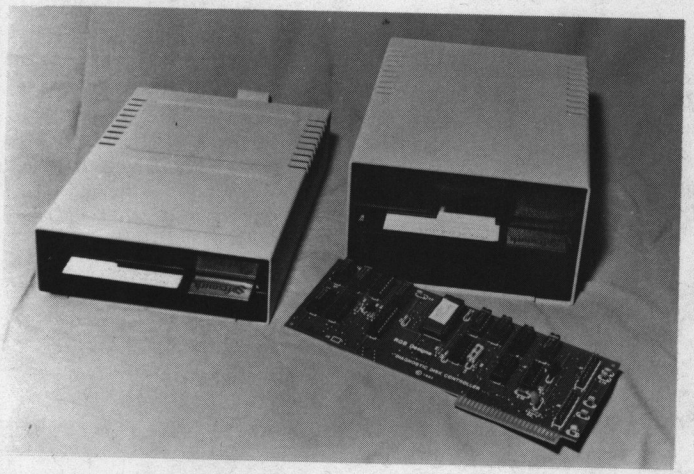
To start the ball rolling, here are the names of some who are willing to help. Join them.

Spreadsheets -
Don Scellato (415) 672-2051 eve.

BASIC -
Joyce Conklin (415) 341-6955

Assembly Lang./ BASIC/ IC's etc. -
Stan Dinsmore (415) 686-3042

Disk Drives & Diagnostic Controller Card



Taur II $220.00 + tax
Taur XL $239.00 + tax
Mini Taur II $239.00 + tax
-half height
-write protect/enable switch

Diagnostic Controller Card $95.00 + tax
Firmware tests of system RAM, ROM, CPU
Language & memory cards
Keyboard, Disk speed & Screen colour
System test on power-up

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1515 Sloat Blvd. Suite 2
San Francisco, CA 94132
Advance orders may be picked up at sales table

B*A*S*I*C

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In preparing the programs to answer the problem which I posed for you last month I was once again reminded of my comments on pre-planning and flow-charting which I shared with you in a previous article.

I started out by loading the data as it was included in the problem and then patching away ("hacking" in computer-talk) to get the program to do what the additional problems called for.

Some of them could be done this way but I ran into so many problems, I reverted to the method which I was forced to use on the first really big computer problem which I ever did in the first class I ever took - reduce the code to the simplest part and run that!

So the first listing is just for the basic problem; find out what each student earned on the test and print out the results.

```
5 REM Simple Grading Problem (#12)

10 DIM A(20) : REM Needed to load cor-
                  rect answers

20 DATA 20,5

30 DATA 1,3,5,4,4,1,1,2,3,5,5,1,2,3,
        4,4,5,3,2,1

40 DATA "PETROCELLI",1,3,4,4,4,1,1,2,
        3,3,5,1,2,3,4,4,5,1,1,1

50 DATA "BAKER",1,3,5,4,3,2,1,2,3,4,
        3,2,2,3,3,3,5,1,2,1

60 DATA "VALENTINO",1,3,5,4,4,1,1,2,
        3,5,5,1,2,3,4,4,4,3,2,1

70 DATA "SIMPSON",1,2,5,4,4,2,2,3,3,
        1,2,1,3,3,3,5,5,3,1,1

80 DATA "CARTER",2,3,5,4,4,1,1,3,3,5,
        4,1,5,4,4,4,5,2,1,3
```

Notice that the data lines contain BOTH alpha and numeric information so the alpha material must be set off by quotes.

As you will see in the second program, if a data line contains ONLY alpha information, you do not need to use the quote marks.

```
90 HOME : PRINT "NAME"; TAB(15);
   "NUMBER"; TAB(25) ; 2NUMBER"; TAB(34);
   "  %  ": REM Two spaces on either side
                of the percent sign

100 PRINT TAB(15); "CORRECT"; TAB(25);
    "WRONG"; TAB(34); "SCORE"

110 PRINT "------------------------------
    ----------" : REM 39 dashes

120 MAX = 0

130 READ N, ST

140 FOR I = 1 TO N: READ A(I): NEXT I
```

I originally had the above line read FOR I = 1 TO N: READ X: A(I) = X: NEXT I but I found I could leave out the extra step and get the same results; all that is really needed is the READ statement, and the DATA item will be stored in whatever address you specify, whether simple variable or subscripted one.

```
150 FOR J = 1 TO ST : C = 0

160 READ N$

170 FOR L = 1 TO N

180 READ Y

190 IF A(L) = Y THEN C = C + 1
```

This line compares each student answer (Y) in turn to the correct answers stored in array A; for each correct answer you increment the counter C by one. The counter must be cleared at the start of each new student run (line 150).

Whenever you see a line or line fragment C = C + 1, this is acting as a counter - remember that the variable need not be C "for counter" but can be anything that makes sense to you.

However, you are encouraged to make your

variable names as mnemonic ("to aid the memory") as possible, and resist the temptation to assign your variables in alphabetical order regardless of the function of the variables!

```
200 NEXT L

210 PRINT N$; TAB(15); C; TAB(25); N-C;
    TAB(34); C/N * 100

220 NEXT J

1000 END
```

So there is the simple problem; however, when you want to include the other "bells and whistles", it is necessary to rethink your approach, because you will want to have some additional information saved during the course of the program so that you may manipulate it later to achieve the desired output.

I found that it was easier to separate the DATA into types, fill the arrays first and then work with the information in that form. Also, if there is to be a fair amount of "invisible" (computer) work time, it is nice to have some indication on the screen that your program hasn't gone out for a walk and forgotten to come home!

This program does not take a lot of time, but if you had a regular class instead of just five students, or you had a final exam of 100 questions instead of just 20, it might take considerably more time.

```
10 HOME : VTAB 10: HTAB 16: FLASH: PRINT
   "WORKING!": NORMAL

20 DATA 20,5

30 READ N, ST

40 DIM A(N,ST)

50 DIM KY(N)
```

Notice that you may dimension an array using variables, IF you have previously defined these variables; hence the necessity for reading the first two DATA items before the DIMension statement, which ordinarily would be at the beginning of the program.

Also pay attention to the order of the DIM A(N,ST) statement; when we get to the lines in the program which fill the answer array, the loops must be the correct lengths, AND the order of subscripts on the array must be the same as the DIMension statement - e.g. for this particular problem, the N value of 20 must be first in the subscript, regardless of what variable we are using to indicate "20" at the time.

```
60 FOR I = 1 TO ST: READ NA$(I): NEXT I:
   REM This will make an array with the
       student names

70 DATA PETROCELLI, BAKER, VALENTINO,
       SIMPSON, CARTER

80 FOR J = 1 TO ST

90 FOR K = 1 TO N: READ A(K,J): NEXT K:
   REM Filling in the student answer
       array

100 DATA 1,3,4,4,4,1,1,2,3,3,5,1,2,3,4,4,
        5,1,1,1

110 DATA 1,3,5,4,3,2,1,2,3,4,3,2,2,3,3,3,
        5,1,2,1

120 DATA 1,3,5,4,4,1,1,2,3,4,4,1,2,3,4,4,
        4,3,2,1

130 DATA 1,2,5,4,4,2,2,3,3,1,2,1,3,3,3,5,
        5,3,1,1

140 DATA 2,3,5,4,4,1,1,3,3,5,4,1,5,4,4,4,
        5,4,2,1
```

If you type your data lines in this manner, you can see immediately if you have left out a data item by the fact that the ends of the lines will not be aligned.

It is easier to correct it at this time, rather than run the program, get an OUT OF DATA ERROR message, put up the DATA lines and then get greasy fingerprints all over your screen counting the data items one by one!

It is made especially easy if you have an editing program resident above HIMEM when you are programming instead of relying upon the somewhat inadequate editing capabilities built into the Apple.

Such an editing program is PLE (Program Line Editor) or the more recent GPLE (Global Program Line Editor) both written by Neil Kozen for Synergystic Software. Anyone who does BASIC programming should have one of these programs.

```
150 NEXT J

160 FOR M = 1 TO N: READ KY(M): NEXT M:
    REM Fill the answer key array

170 DATA 1,3,5,4,4,1,,2,3,5,5,1,2,3,4,4,
        5,3,2,1

180 REM THE GRADING PROCEDURE STARTS
        HERE

190 FOR I = 1 TO ST

200 C = 0
```

```
210 FOR J = 1 TO N

220 IF A(J,I) = KY(J) THEN C = C + 1
```

Notice that the J, which will eventually reach 20 (N) is stated first in the array subscript, and the I, which will go to 5 (ST) is stated second.

```
230 NEXT J

240 SC(I) = C: REM Fill a score array to
                   match the name array
                   in order

250 NEXT I

260 VTAB 10:HTAB 16: PRINT "SORTING "
```

Note that there is a space after the word SORTING above. This is because there is an extra character in WORKING! which was displayed in FLASHing mode.

If you do not include the extra space after SORTING which in in the NORMAL mode, the FLASHing exclamation point will still be there, driving you nuts if your program takes a long time!

```
270 SW = 0: REM Start the sorting routine

280 FOR L = 1 TO ST - 1

290 IF NA$(L) = < NA$(L+1) THEN 320
```

Notice that for a simple bubble sort, the "cap" of the loop variable must be one less than the length of the array being sorted; otherwise when you address the final loop variable (in this example it would be ST, instead of the ST-1 which we have) the comparison in line 290 will be made to an empty element, or to one beyond the size of the dimension.

An empty element will cause you to lose the last real item in your array as a null character is "less than" any alpha or numeric value; going beyond the size of the dimensioned array will generate a BAD SUBSCRIPT ERROR IN nnn message.

```
300 T$ = NA$(L): NA$(L) = NA$(L+1):
    NA$(L+1) = T$: SW = 1

310  T = SC(L): SC(L) = SC(L+1): SC(L+1) =
T
```

These two line alphabetize the names (line 300) and keep the scores aligned with the proper name (line 310). In a future article I will show you a way to sort which will not require moving elements of two different arrays but will still keep the information "connected".

```
320 NEXT L

330 IF SW = 1 THEN SW = 0: GOTO 280

340 MS = 0: REM Det'n high score and
                student name for that
                score

350 FOR J = 1 TO ST

360 IF SC(J) > MS THEN MS = SC(J): MN$ =
    NA$(J)

370 NEXT J

400 HOME: VTAB 2: PRINT "NAME"; TAB(15);
    "NUMBER"; TAB(25); "NUMBER";
    TAB(34); "  %  "

410 PRINT TAB(15); "CORRECT"; TAB(25);
    "WRONG"; TAB(34); "SCORE"

420 PRINT "==========================
    ========"

430 FOR K = 1 TO ST

440 PRINT NA$(K); TAB(15); SC(K); TAB
    (25); N - SC(K); TAB(36); (SC(K)/N)
    *100

450 NEXT K

460 PRINT: PRINT: PRINT: PRINT "HIGH
    STUDENT SCORE:"

470 PRINT MN$;" EARNED "; (MS/N) * 100;
    "%"

480 GOSUB 5000

490 HOME: VTAB 5: PRINT "FREQUENCY
    DISTRIBUTION"

500 PRINT "==========================
    =========="

510 FOR L = 1 TO ST

515 Q = INT((SC(L) / N) * 10) - 3: IF
    Q = 0 THEN Q = 1
```

This line creates a number, based on the score, which will be in the range from 1 to 6 which is the number of different categories you want in the frequency distribution. The logic falls apart if someone really bombs the test and gets a score of less than 10, because Q would then be equal to 0, which will generate an error message in line 530.

Anybody got an algorithm which will hold for all cases? At the moment, the only way out is the second part of the statement above. The line has an interim number, instead of a multiple of 10, because I could not get the formula to work when inserted directly in line 520 - maybe I had some minor error or a missing parenthesis, but it was about

midnight when I got to this point and I was too dopey to figure out why - I just hacked my way out!

```
520 ON Q GOTO 530, 540, 550, 560, 570,
    580

530 FD(1) = FD(1) + 1

540 FD(2) = FD(2) + 1

550 FD(3) = FD(3) + 1

560 FD(4) = FD(4) + 1

570 FD(5) = FD(5) + 1

580 FD(6) = FD(6) + 1
```

Remember the "counting" format?

```
590 NEXT L

600 PRINT "90 OR ABOVE ... "; FD(6)

610 PRINT "80 TO 89 ..... "; FD(5)

620 PRINT "70 TO 79 ..... "; FD(4)

630 PRINT "60 TO 69 ..... "; FD(3)

640 PRINT "50 TO 59 ..... "; FD(2)

650 PRINT "BELOW 50 ..... "; FD(1)

660 PRINT "----------------------"

670 PRINT "                    ";
```

Don't forget the semi-colon at the end of line 670!

```
680 FOR L = 1 TO 6: SUM = SUM + FD(L):
    NEXT L: PRINT SUM
```

The last part of line 680 will print SUM immediately following the quote mark (which won't show) - actually after the last space - in line 670; that's why the semi-colon.

```
690 PRINT: PRINT "AVERAGE GRADE FOR EXAM
     = "; REM Only one space between the
              word EXAM and the = sign

700 FOR J = 1 TO ST: TT = TT + SC(J)/N:
    NEXT J: AV = TT / ST: PRINT AV *
    100;"%"
```

TT = TT + SC(J)/N is not in the "counter" format which we saw above; rather it is the way to accumulate a total of a number of items. The difference to look for is that a counter will always have "... + 1" and an accumulator will have "... + (variable)".

```
1000 END

5000 VTAB 23: HTAB 8: PRINT "PRESS SPACE
     BAR TO CONTINUE";

5010 GET A$: IF A$ = CHR$(32) THEN RETURN

5020 GOTO 5000
```

So there is my way of solving the grading problem. If you have a more elegant method, or if you have the answer to the "ON Q" algorithm, send it along to me and you too can be a published author!

. . . . .

In reference to the PLE program which I mentioned above, it does have some quirks that catch you short if you are not expecting them.

PLE uses the <ESC> key to precede many of its macro commands, so you cannot debug a program which requires the <ESC> key to be pressed while PLE is still resident in memory.

I also ran across another weird situation while doing this article; if anyone knows what happened, I would appreciate an explanation. While writing the program, I had PLE in memory, above HIMEM as usual, so that I could make the many corrections which I always seem to need.

When I got the simple program to run, I decided to save a copy on the printer, as I could then enter it more easily into the article (program listings in the articles are not right off the printer to avoid the funny breaks that Apple's listing in 33 columns gives).

After returning to screen control with PR#0, the use of the <ESC> key to stop a listing would not work, although I could still use Apple's Ctrl-S. However, after using Ctrl-E to edit a line, doing some change to the line, and pressig <RETURN>, the use of <ESC> to stop and start scrolling was again available! Why??

. . . . .

The problem for the month is this one, also from my list of semester-end problems. This will allow you to play around with graphics as well, if you so desire.

8. (8 points) Play a game of craps under the following rules: Two dice are rolled at each turn and...

1. You win if on the first toss you roll 7 or 11 (a natural.)
2. You lose if on the first toss you roll a 2, 3, or 12 (craps.)
3. If you roll a 4, 5, 6, 7, 8, 9, or 10

on the first toss, then this number becomes your point for subsequent rolls.

4. To win, you must roll your point again BEFORE you roll a 7.
5. If you roll a 7 while trying to get your point, you lose.

Assume that one person, i.e. the user, is rolling the dice. For printed messages, it will be sufficient to supply some initial explanatory comments to the user (rules of the game), dice totals as they are rolled, and "YOU WIN" or "YOU LOSE" statements at the appropriate places.

8a. (4 points) Do the above problem, and in addition have the dice show pictorially on the screen instead of just the numbers being displayed.

8b. (5 points) Do problem 8 (or 8a) and in addition have the computer keep track of the money and bets. The user/player starts with $1000 and may be any amount up to and including $1000, provided that his bet does NOT exceed the amount in his possession at the time ($1000 is the house limit at this table.)

The program should account for accumulated winnings and losses and should include such statement as "YOU'RE BROKE!!" or "THE TABLE IS NOW CLOSED." There are three options for stopping the game:

1. The player quits by his own choice.
2. The house quits after it has lost, and the player has won, $1000.
3. The player has gone broke.

You should include such comments during the program as...

```
YOU HAVE LOST $...
DO YOU WANT TO ROLL AGAIN?
HOW MUCH IS YOUR BET?
YOU NOW HAVE $...
etc.
```


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Pascalia and Fugue

The Computer as a Typewriter - 3

-Max J. Nareff

The following program is reprinted from the Journal of Pascal & Ada, Sept./Oct.1982, with permission of the editor. Minor changes have been made, including more explicit var-iable names.

Procedure Position controls the direct positioning of the print head, all movements of which are governed by use of the right and the left arrows, down (Cntrl/J) and carriage returns (CR). All movements with one exception are terminated by use of the space bar after the desired position has been attained. Then enter a line of text.

NOTE: When using the arrow or cntrl/J keys immediately following a <CR>, do not use the <SPC> key until after these keys have been used. The first positioning motion will require two of the key entries. In other words, every <CR> will need an immediate <SPC> except when change of the position of the print head is required following the <CR>. With a little experimentation the user can adapt to these eccentricities of the program.

To end printing, enter <Cntrl/C>.

```
PROGRAM TYPEWRTR;
VAR
   I : INTEGER;
   ASCII_CHAR : INTEGER;
(** of spaces to indent same as last
line *)
   INDENT : INTEGER;
(* Interactive input text *)
   KEY_PRESSES : INTERACTIVE;
   F : INTERACTIVE;
   CH   :   CHAR;  (*char for printhead
location*)
   S  :  STRING;  (* String to be printed
*)

(*Position   print   head   to   desired
location*)
 PROCEDURE POSITION (VAR CH :CHAR);
 BEGIN
   WHILE CH <> ' ' DO
    BEGIN

     READ (KEY_PRESSES, CH);
     ASCII_CHAR := ORD (CH);
     CASE ASCII_CHAR OF
       10:    WRITE   (F,   CHR(10));   (*
Cntrl/J*)
        8: IF INDENT > 0 THEN
             BEGIN
               WRITE  (F, CHR(8)); (* Left
*)
               INDENT := INDENT - 1
             END;
       21: BEGIN
             WRITE (F, ' ');  (* Right *)
             INDENT := INDENT + 1
           END
    END (* CASE *)
   END (* WHILE *)
END; (* POSITION *)

BEGIN  (* MAIN *)
  PAGE (OUTPUT);
  WRITELN;WRITELN
('Printer-On:Position
printhead:<SPC>,etc.');
  WRITELN;WRITELN
('Remember,<SPC>    after   positions   &
<CR>s.');
  REWRITE (F, 'PRINTER:');
  RESET (KEY_PRESSES, 'CONSOLE:');
  INDENT := 0;
  WHILE NOT EOF (KEY_PRESSES) DO
    BEGIN
      POSITION (CH);
      READLN (KEY_PRESSES, S);
      WRITELN (F, S);
      FOR  I  := 1 TO INDENT DO WRITE (F,
' ');
      READ (KEY_PRESSES, CH)
    END; (* WHILE *)
  WRITELN (F)
END. (* TYPEWRTR *)
```

Epson Salts

Dumping It

(C) 1983 by Michael Fischer

Part 4 of a Series

Our job this month will be to translate lines 10-70 of the BASIC program listed last month into assembly language. This will complete the assembly language parts of the program.

Line 10, "PR#1", is easy. We only need to load the accumulator with the slot number of the printer (1 in our case) and then jump to the monitor routine PROUT located at 65173 ($FE95). PROUT does the equivalent of a PR# with whatever number is in the accumulator.

```
LDA #$01
JSR $FE95
```

Initialization

Next, if you want, you can send a "set-up" code to the printer -- either set double strike or emphasized, double wide, or whatever. It's your choice. Or you can send nothing. I send an "Escape @" sequence which reinitializes the Epson to its start-up settings. To do so I successively load the accumulator with the ASCII codes for Escape (27 ($1B)) and "@" (64 ($40)) and jump to the subroutine COUT (described last time).

```
LDA #$1B
JSR COUT
LDA #$40
JSR COUT
```

Next lets translate line 70 which reads:

```
    FOR  I = S TO E STEP 128 :  GOSUB 80 :
    NEXT I : RETURN
```

First we need to set aside two locations in Apple's memory on page 0 to hold the values of I and E. Since these numbers are bigger than 256, we need two bytes to store each one. The reason we don't need a special storage location for S is that I is initially set to S and from then on the value of X is irrelevant.

Next the three starting (or S) values for I must be placed into storage in the program. This is done, in the Big Mac assembler, by use of a label and the DFB (or DeFine Byte) pseudo-op.

Pseudo What???

A pseudo-op code is a command which is not a standard 6502 operation code but is one used by the assembler for ease in programming. For example, we could insert code loading the accumulator with the three numbers and storing each one. Or we could tell the assembler to do this with DFB.

```
ISTLO DFB 00, 28, 50
```

This stores the lower byte of 1024 ($400), 1064 ($428) and 1104 ($450) into the pgoram with the label ISTLO (for I STart, LOw byte).

```
ISTHI DFB 04, 04, 04
```

This does the same for the high byte which is, in all cases, $04.

We next place the three ending (or E) values for I into storage. These numbers are 1920 ($780), 1960 ($7A8) and 2000 ($7D0). The labels are ILIMLO (for I LIMit LOw byte) and ILIMHI (for I LIMit HIgh byte).

```
ILIMLO DFB 80, A8, D0
ILIMHI DBF 07, 07, 07
```

Which Set

Next we need to have some way of keeping track of which of the three sets of numbers we are using. To do this we need to learn another addressing mode -- the indexed method. In the indexed method the value of the appropriate index register (X or Y) is added to the address following the op code to get the true address. Thus if the X register held the value of 5, a LDA $53,X command would load the accumulator with whatever value is in address location $53+5 or $58.

To keep track of our three sets of numbers we first load the X register with zero and after going through the loop we then increment X, check that it is less than three, and if not turn off the printer and leave. The coding for this is:

```
LDX #0
MAINLOOP . . .
INX
CPX #3
BLT MAINLOOP
LDY #0
JSR $FE95
```

This routine turns off the printer.

```
JMP $FD6F
```

This monitor routine continues the program as though control P had never been pressed.

Variable Storage

To set I in line 70 to the proper value of S we use the coding, beginning at MAINLOOP, as follows:

```
MAINLOOP LDA ISTLO, X
```
Depending on the value of X, this command takes the low byte of the first, second or third value of S.

```
STA IVAL
```
IVAL is the page zero location used to store the low byte of the value of I.

```
LDA ISTHI, X
STA IVAL+1
```
This does the same for the high byte value of I. The address IVAL+1 will be adjusted by the assembler to be $EE.

Next we need to set E to its proper value. We use the same technique:

```
LDA ILIMLO, X
STA ILIMIT
LDA ILIMIHI, X
STA ILIMIT+1
```

The next command in line 70 is "GOSUB 80". The subroutine beginning at line 80 was coded last month. The only change needed will be a label naming it "DOLINE". Thus "GOSUB 80" translates to:

```
LOOP JSR DOLINE
```

The reason for the label with the JSR is after we translate the "NEXT I" command we will want to be able to jump back to loop.

New Commands

In order to do a "NEXT I" we need to add 128 ($80) to I and check if it exceeds the value of E (or ILIMIT). If not we loop back and continue.

Addition requires the learning of two new commands and the comparison requires the learning of a new branch command. These are:

ADC - for ADd with Carry. The number in the accumulator is added to the number specified together with the carry bit, a special location in the 6502 processor. The carry bit contains any overflow from the previous addition. At the end of the process the sum is placed in the accumulator and the overflow, if any, in the carry bit.

CLC - for CLear the Carry bit. This sets the carry bit to zero.

BEQ - for Branch if EQual to zero. This is like the other branches but it is taken only if the last operation resulted in a zero result (if, *e.g.*, the comparison was between two numbers which are the same).

Next I

The "NEXT I" command, then, translates as:

```
CLC
```
Make sure the carry bit starts out as zero.

```
LDA #128
ADC IVAL
```
Add in the value of I (low byte).

```
STA IVAL
```
Save the result.

```
LDA #0
ADC IVAL+1
```
Add any carry to the high byte.

```
STA IVAL+1
```
And store it.

```
CMP ILIMIT+1
```
See if IVAL high byte is less than the limit or E value.

```
BLT LOOP
```
If it is, E hasn't been reached and the loop should continue.

```
BEQ C1
```
If high bytes are equal, check low bytes.

```
JMP NEXTI
```
Otherwise go on to the next S and E values.

```
C1 LDA IVAL
```
Get low byte for I.

```
CMP ILIMIT
```
And check with low byte of E.

```
BLT LOOP
BEQ LOOP
```
Continue if low byte limit has not been exceeded. Otherwise continue with NEXTI.

Next month we will present the complete assembly listing and discuss the means of entering the program into your own machine.

An Apple for the Teacher?

Part //e

-Carole Woods

This article is an excerpt from the Sep 83 Newsletter of the Reading / Language Arts Interest Group of the California Reading Association, reprinted here with the author's permission.

In the last newsletter I summarized some studies done on student use of computers. Basically, student use of computers has not resulted in higher achievement. Two related problems were (are): too few computers for too many students, resulting in inadequate access time, and, software programs that are of poor quality, don't correlate with curriculum, and perpetuate the workbook/test format of a single, correct answer.

As usual, a lot has been happening in the computer field since that last newsletter. The greatest change is that every school in California should now have an Apple //e computer, disk drive, monitor, and Logo software. This is all part of Apple's "Kids Can't Wait" program. The //e is a beautiful system. Now all we have to figure out at my school is--

-where to store it

-how to keep it from being stolen or wrecked

-who is going to teach the teachers and kids how to use it

-what software is available

-what about add-ons like a printer, joysticks

and the "BIGGIE"

-how can 680 kids have access to one computer!

While the problem of student access time will take years to overcome and will vary greatly because of school wealth, the availability of decent software is increasing rapidly; though not much for primary grades or in the language arts area.

When evaluating some current software, my main objections to the educational programs are that -

1. the game format usually involves violence
2. the drill/practice programs normally just record a total score, seldom pinpoint errors and are often just glorified flash cards or mechanized worksheets.
3. the programs that involve speed are frustrating unless the student knows the answers so well that he/she has no need to practice.
4. few programs control the readability
5. many programs are educationally unsound. For example, several programs deal with vocabulary or labeling parts of speech out of context. In such a program, how is the student to determine if "cut" is a noun or a verb. Without context, how could it be decided what the synonym for "kind" or the antonym for "ride" is? These programs lead the student to narrow down the concept of language rather than enlarge the idea of language flexibility.

The best programs I've seen for students seem to be in the areas of spelling, word formation, puzzle-type programs and word processing. The Bank Street Writer program is a word processing program with easy commands. I think it would encourage students to compose more and revise without complaining. Another area that sounds promising is "authoring" programs. These programs allow the teacher to program tests, practice, or games without having to know programming.

At the present time, there is so little quality software that it is foolish to buy software sight unseen. Some sources

for software are the public domain programs available through the Teacher Resource Centers or local computer clubs, such as the San Francisco Apple Core. There are stores that specialize in software and permit potential customers to try out a program in the store. Computer fairs are common and, though totally overwhelming, have software on display. Lastly, computer magazines often describe and review software.

Although research does not support student use of computers as being any more effective than other, more traditional, types of instruction or supplemental instruction, this does not mean that computers cannot be useful tools if the teacher controls the content, format, and matches the use with student need.

At the present time, I think the greatest use of computers in education is for teachers. As teachers find work easier because of using a computer for word processing, programming, storage and manipulation of information, they will become more sensitive to the appropriate use of computers by students.

▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪
▪ ▪ ▪ ▪ ▪

The RENUMBER Fix

The RENUMBER program on the DOS System Master disk has a bug. Under certain circumstances, the value of a constant used in multiplication may be changed during the renumbering process. The following steps will fix this problem.

```
]LOAD RENUMBER
]POKE 4789,172
]POKE 4790,171
]UNLOCK RENUMBER
]SAVE RENUMBER
]LOCK RENUMBER
```

Marketing

by

Don Scellato

By the time you receive this issue of the Cider Press, the Third Semi Annual Swap Meet will be over and you will have found a few bargains. We will be releasing a new Pascal disk at that event - 1983 Pascal Disk No. 1. All of the programs on the disk were written and donated by Max Nareff.

We will also be releasing two new disks. The first will be the Mailing List Program disk entered in the Programming Contest by Kathy and Andy Rudovsky. It is an excellent program which allows the user to build a mailing list file and print out labels from the list.

The second is a general collection of programs which are useful or entertaining. The latter will be called SFAC 1983 Disk No. 3.

We will post sign up sheets at the Swap Meet for volunteers to help man the Sales Table which the Club will operate at the Applefest. The show runs from 10:30 till 5:30 on October 28, from 10:30 till 5:30 on October 29, and from 11:30 till 5:30 on October 30.

If you can help during some portion of those times, please sign up at the swap meet. If can't sign up at the swap meet for some reason, call me at the number listed in the Cider Press.

Starting at the Swap Meet we will have available for sale to Club members three really fine locally made disk drives and a controller card which performs diagnostic tests. These products are manufactered by RGB designs.

Three of the products are featured in an advertisement in this issue of the Cider Press.

The first of these products is the Taur II full height disk drive which comes with a 90 day warranty and features a Shugart SA-390 mechanism with full and half track capability. This disk drive will be priced at $220 plus tax for members.

The second product is Mini Taur II half high disk drive which features 35/40 track operation, user selectable write protection, a 90 day warranty, and full and half track capability. This product will be sold at a price of $235 plus tax to members.

The third product is Taur II XL disk drive which is a full height disk drive similar to the Taur II except that it has 35/40 track capability. This product will be sold to Club members at a price of $235 plus tax.

The fourth product is a Diagnostic Disk Controller Card which features a collection of diagnaostic programs in IC's on the card. These diagnostics test RAM, ROM, Disk Speed, the Keyboard, Color, and Memory Expansion Cards. This product will sell to Club members for $95 plus tax.

If you wish to purchase one or more of these disk drives, we'll try to have one of each at the sales table at each meeting. To be safe, call me a week before a meeting and I'll arrange to have as many as you need available at the meeting.

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Are you a local business or individual who wants to trade in your old Apple on a new IIe? If so, consider donating it to the Science Department at Redwood High School, Larkspur. Our students would be very grateful and Uncle Sam would reward you by a suitable reduction in income tax. Your friendly Apple dealer would probably cooperate in this effort to help a local school. I'd like to talk to you even if you are only interested in making a donation, but not a trade in. Contact: John Girton, 15 Del Norte, San Anselmo, CA 94960. Tel: (415) 457-2647.

Interest Groups

by Sami Capron.

At the November general meeting we will have our first interest group extravaganza. At this meeting you will have an opportunity to talk talk to active club groups which are listed monthly in the Cider Press.

Bring with you all the questions you always wanted to ask ... maybe you'll get some of them answered. The groups are interested in your questions and suggestions.

Also at this meeting we will have new interest group signups. You will be matched with others with like interests. If you are interested in any new or existing group then this is definitely the meeting to come to.

Existing Group Information:

The nu'ers group that was meeting in Marin has found a new home at the clubhouse.

Cathy Rudovsky has volunteered to coordinate the San Francisco nu'ers group which will meet on the third Wednesday of the month beginning in October. The first meeting will be on October 19th at 7:30 P.M. At that meeting Don Scellato will discuss the various "Calc" programs available for the Apple. For more information contact Cathy at 756-6480.

The Forth interest group continues to welcome new members. If you aren't currently using Forth, but would like to, come to the next meeting and receive a free copy of Forth. Of course, bring a disk.

Green Apples (BASIC) is starting over again in September. Don't miss this opportunity to learn BASIC from Gary Owens. Not only is the class outstanding, but it is also free to club members.

Adopt-A-School

I have had a good response from club members willing to donate their time to the Apple Computer - Adopt-A-School program. Unfortunately my Apple contact has not as of this date (Aug) sent me the list of schools needing assistance

I will continue to encourage Apple computer to send me a list, however at this time it is questionable whether a program can be organized in time for the start of school.

If you are interested in participating, give me a call at 388-8631 (day & eve) or 499-6669 (day). I have a list of interested people and could use more.

VisiCalc

by

Don Scellato

The VisiCalc Interest Group met at the Clubhouse at 7:30 on August 9. The group tried out VisiCalc with the Accelerator card. The processor on the card operates at 3.3 megahertz - three times as fast as the one in the Apple which operates at 1.1 megahertz. VisiCalc ran so fast using the card that it looked extremely slow when we removed it.

The East Bay Visicalc Interest group met at Breuner's Furniture Store in Pleasant Hill at 7:00 on August 25. The group reviewed a spreadsheet written by Stan Dinsmore to track medical expenses for tax and insurance purposes.

They also examined the documentation from the earliest version of VisiCalc through VisiCalc Advanced Version. Finally some time was spent on an Apple III running the Advanced Version and examining its capabilities.

The next meeting of this group will be held at the Clubhouse on 1515 Sloat Blvd. in San Francisco at 7:30 P.M. on September 13. We will be working with the CP/M Version of Multiplan at that meeting and will discuss any spreadsheets brought in by attendees.

The next meeting of the East Bay Visicalc Interest Group will be held at Breuner's in Pleasant Hill at 7:00 P.M. on Thursday, September 22.

This meeting will be devoted to the use of spreadsheet programs for tax preparation and applications. I will bring several spreadsheets written for this purpose and invite all who attend to bring any they may have written.

Telecommunications

On Wednesday, August 24, 1983, the Telecommunications Group met at the club house. Frank Fennelly was not able to attend, but kindly loaned us his Apple///, and Hayes Smart MODEM.

Ms. Bargara Gersh from the marketing dept. of 'DIALOG' INFORMATION SERVICES Inc., 3460 Hillview Ave, Palo Alto CA. 93404. Telephone (415) 858-3742 (the TELEX number for those of us with TELEX capability is 334499+), then took us through a very generous hour and a half of information available from the I.S.I. data bank called KNOWLEDGE INDEX.

I say generous, because 'DIALOG' I.S.I. is 40 cents per minute, $24.00 per hour. There is also a $35.00 installation fee. For the cost, you will receive two (2) free hours of connection, along with the operating manual (tutorial), and two (2) hours free instruction. You also receive a discount coupon worth $10.00 which may be used towards the purchase of a Hayes MODEM, and/or soft ware to enter the system.

A full, excellent detailed brochure was distributed at the meeting, and is available by calling the above numbers, Monday through Friday, 07:00 through 23:00.

'KNOWLEDGE INDEX' indicates that there are 10 million summary articles, reports and books on thousands of subjects available. Business information; Agriculture; (remember you may have a home garden); Medical (check up on your doctor); Computers and Electronics to name a few.

As yet there are no airline schedules, and the writer did not learn if this information was to be added in the future. (Just think of the times and prices you could be armed with as you get ready for that long planned vacation, BEFORE! you go to your travel agent.

It took us a short time to set up the equipment, but when we got our system going, and learned the key codes, the 'System' was very easy to use. Check it out, who knows some of you may be able to use it. This writer found the meeting very interesting and far too short.

DAVID L. MCGUIRE

The following events are scheduled for/by the Telecomunications interest group. For more information and detail, contact Frank Fennelley (phone no. on calendar page)

28 Sept. - Ron Hochsprung of Apple Computer, Inc. will speak about Apple Net - a multi-user network system for in-house linking of computers.

26 Oct. - A tour of the TYMNET facility in San Jose has been tentatively arranged for this date. Space is limited, so if you are interested in going, you can sign up at the Telecomunucations group meeting on 28 Sep at the clubhouse.

```
########################################
#                                      #
#          AUTHORS WANTED              #
#                                      #
#  Share your experiences, Apple       #
#  programming hints,pascal tips,      #
#  software reviews. Send your         #
#  material to the Cider Press         #
#  Editor at the Clubhouse.....        #
#                                      #
########################################
```

September 1983

Monday	Tuesday	Wednesday	Thursday
			1 Green Apples 8:00
	6 East Bay 7:30 Forth 7:30		
12 Pascal 7:30	13 CP/M 7:30 VisiCalc 7:30	14 Marin Graphics 7:30	
	20 Forth 7:30	21 Apple /// 7:30	22 Green Apples 8:00 VisC-East Bay 7:00
26 Pascal 7:30	27 CP/M 7:30 Epson 7:30	28 Telecomm'ns 7:30	29 Green Apples 8:00

October 1983

Monday	Tuesday	Wednesday	Thursday
	4 East Bay 7:30 Forth 7:30		6 Green Apples 8:00
10 Pascal 7:30	11 CP/M 7:30 VisiCalc 7:30	12 Marin Graphics 7:30	
	18 Forth 7:30	19 Apple /// 7:30 Nu'ers 7:30	20 Green Apples 8:00 VisC-East Bay 7:00
24 Pascal 7:30	25 CP/M 7:30 Epson 7:30	26 Telecomm'ns 7:30	27 Green Apples 8:00

INTEREST GROUP LEADERS

Apple ///	Don Norris	673-7635 (day)
CP/M	Jim Ayers	383-0473(day)
		383-5759(eves)
East Bay	Molly Mitchell	526-9541
Epson	Michael Fischer	557-1250 (day)
		933-4435(eve)
Forth	Dudley Ackerman	626-6295
Green Apples (BASIC)	Gary Owens	521-4002
Marin Graphics	Reed Harris	924-7221
	Bob Sachs	332-3331
Nu'ers	Cathy Rudovsky	756-6480
Pascal	Mike Schnapp	386-2238
Product Review	"Woody" Liswood	585-6375
Telecommunications	Frank Fennelly	(408)984-7321
VisiCalc	Don Scellato	672-2051(eve)

APPLE CORE OFFERINGS

NOTES

SFAC 1983 DISK NUMBER 1 contains only three programs due to the nature of one of the programs - a hi-res graphics game. This game is called "The Incredible Shrinking Man" which was contributed by the Chiang Brothers. Also included on the disk is a High Score Tabulator and hi-res graphics display program called Gallery.

LIBRARY #1 contains over 340 programs. It is packaged in diskette holders and is bound in a SF Apple Core binder with over 30 pages of documentation. This documentation alone is available for three dollars.

LIBRARY #2 continues the tradition started with Library #1. It contains over 250 programs from the 1980 DOMs.

1981 YEARBOOK contains 12 disks containing all DOM programs from 1981. There is a heavy emphasis on games and business applications.

1983 PROGRAMMING UTILITIES contains a collection of utilities not collected on a single disk before. These utilities come from a variety ofsources such as IAC disks, 1981 DOMs, and 1982 DOMs.

1983 GAME SET consists of two disks containing games not collected in a single set before. It contains a variety of hi-res, lo-res, and text games.

1983 EDUCATION APPLICATIONS is a set of two disks containing interactive learning programs, a grade maintenance program, and GRAMMAR QUEST an interactive learning game.

1983 HOME APPLICATIONS consists of two disks of programs useful around the home. One disk was from the 1982 Home Pak. The second disk is a collection of programs gathered from IAC disks and other recent contributions.

SFAC 1983 DISK 2 - this disk contains a collection of games, home applications, education applications, and utilities.

IACBASE - this is a DataBase Manager provided by the International Apple Core. It is written in run time PASCAL and provides the user with an inexpensive DataBase Manager.

MACHINE LANGUAGE TUTORIAL/UTILITIES - this disk teaches the principles of Machine Language Programming and provides the user with some convenient programming utilities.

PRODUCT	MTG	MAIL
Library #1	98.00	101.50
Library #2	98.00	101.50
1981 Yearbook	98.00	101.50
DOMs		
Mar 82	5.00	7.00
Apr 82	5.00	7.00
May 82	5.00	7.00
COLLECTIONS		
Basic Tutor Pak(3)	20.00	22.00
Forth Pak (3)	20.00	22.00
Game Set (2)	15.00	17.00
Home Applications(2)	15.00	17.00
Education Applic.(2)	15.00	17.00
1983 Prog Util.(1)	10.00	12.00
SFAC Visicalc Temp(1)	10.00	12.00
1983 Visicalc Util(1)	18.00	22.00

All foreign orders: Add 25% to above prices.

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